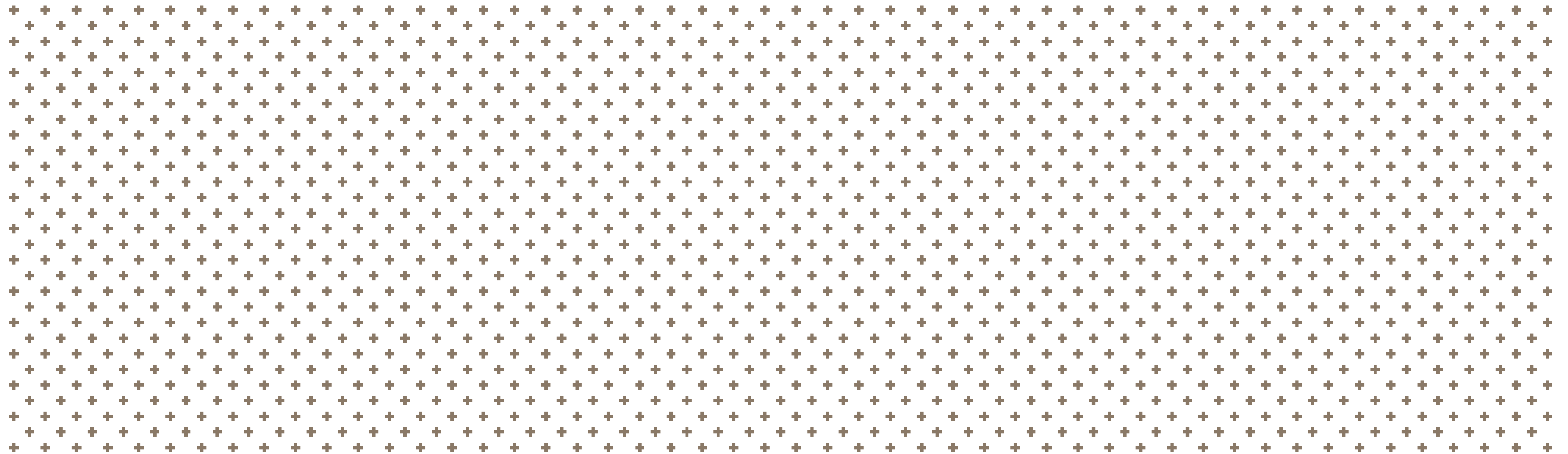
LOMBARD ODIER
INVESTMENT MANAGERS

Frictional Diversification Costs: Discussion

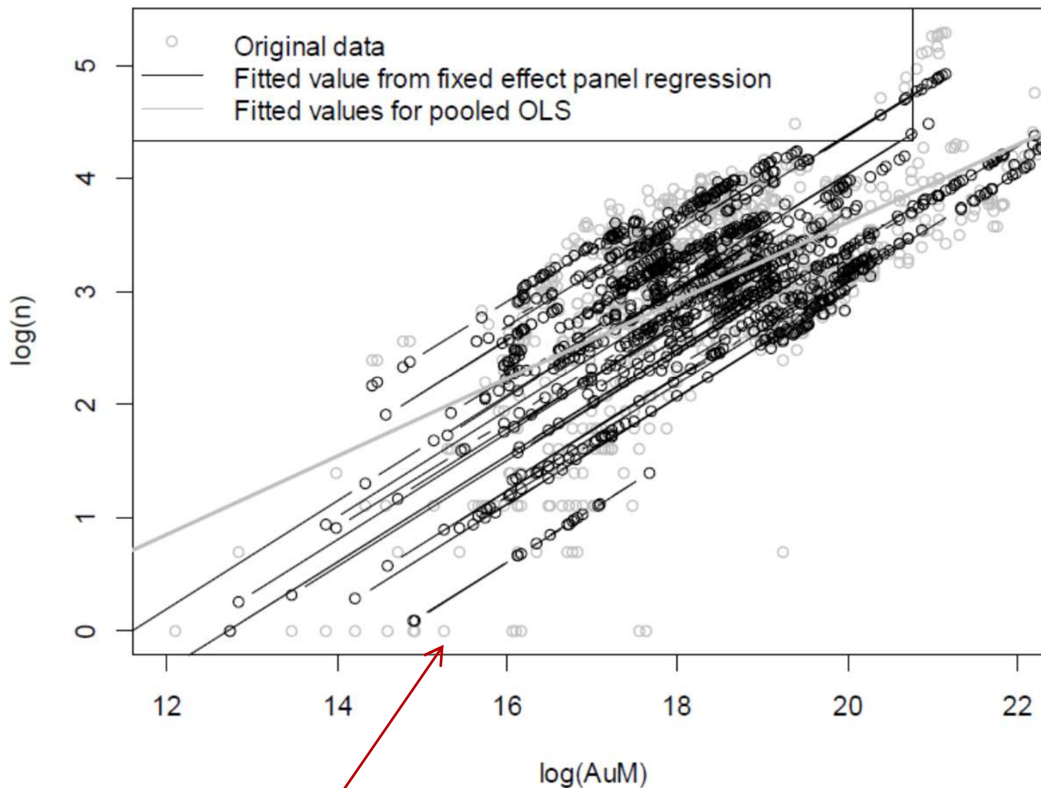
Risk Based and Factor Investing Conference
Thierry Michel



FOR PROFESSIONAL INVESTOR USE ONLY

© All rights reserved. Lombard Odier Investment Managers.

The evidence: the # of lines in a fof increases as the square root of AuM



What's up with one-line portfolios?

Good fit (R^2 = 85%) for n(funds) $\sim \sqrt{AuM}$

Individual effects fit significantly better than pooled regression.

The inference assumes log-normality but no test of the distribution of AuM or n(funds).

Yet, given the simplicity of the functional form, it appears robust, and alternatives (raw data, threshold form) perform worse.

A lagged term seem to improve the results (by how much?)

(alternative graph: removed fixed effects and plot all points on the same slope(s), with estimated value and 0,5)

The story

The evidence is consistent with a naïve diversification model:

the number of assets in the portfolio is an arbitrage between the risk reduction and the marginal costs of adding lines to the portfolio,

Returns, dependencies and individual volatilities -but see below- are not needed to explain the result; fund of funds managers do not optimize their portfolio in the classical sense.

Fixed effects account for average volatilities and correlations of the portfolio components, risk aversion, eventually incentives etc.

Deviations from the 1/n rule (active money) mostly explained by risk scaling, performance drift and illiquidity.

Deviation from separation theorem:

preference for skewness should lead to under-diversification

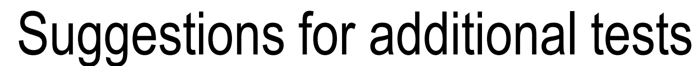
"career risk", fund of fund managers have less incentive to go off-list

but

fund performance might be decreasing with size (evidence is mixed)

concentration limit constraints force diversification

Can the combination yield the $\sqrt{AuM}$ shape?



Volatility is not actually shown in the paper, but does naïve diversification work? Should bigger funds be less volatile, since they are better diversified?

Shouldn't inflows and redemptions be treated differently? Funds subject to redemptions should be more diversified, given the fixed costs have already been paid before.

Turnover should likewise increase with AuM – as per the decreasing costs hypothesis. Does the data support that?

About Lombard Odier Investment Managers
Lombard Odier IM is the asset management business of Lombard Odier, focused on institutional investors, third-party distributors and financial intermediaries. Lombard Odier has always been wholly owned and managed by its partners who are responsible for the day-to-day management of the firm. This independent structure means that we are able to focus 100% on our clients rather than shareholders. And our size and focus mean that we can respond with agility to market events.

www.loim.com